Title: XML AUTO MAP GENERATOR
Inventor(s): Jeffery R. ECK
Appl. No.: 09/750,287

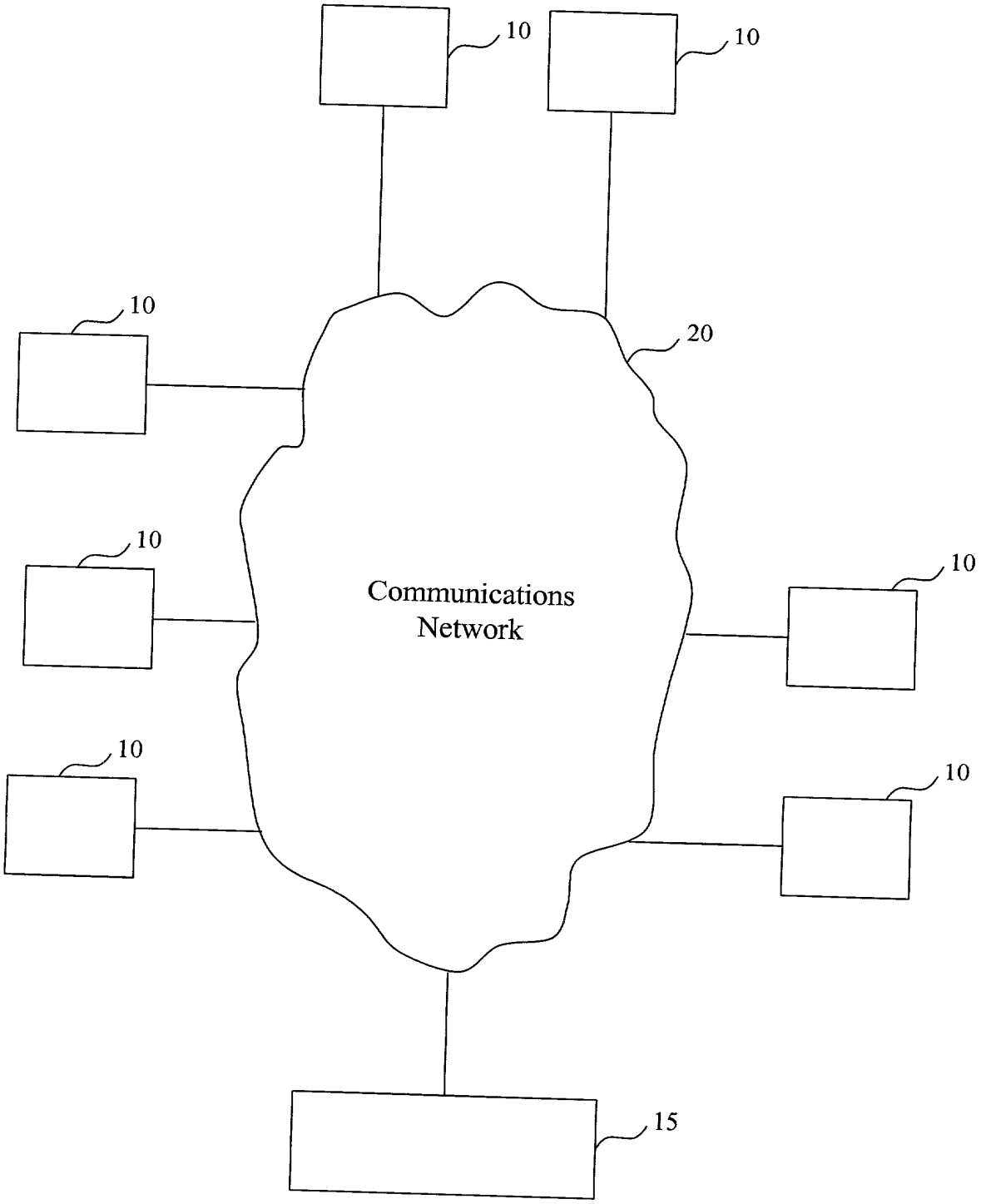

Fig. 1

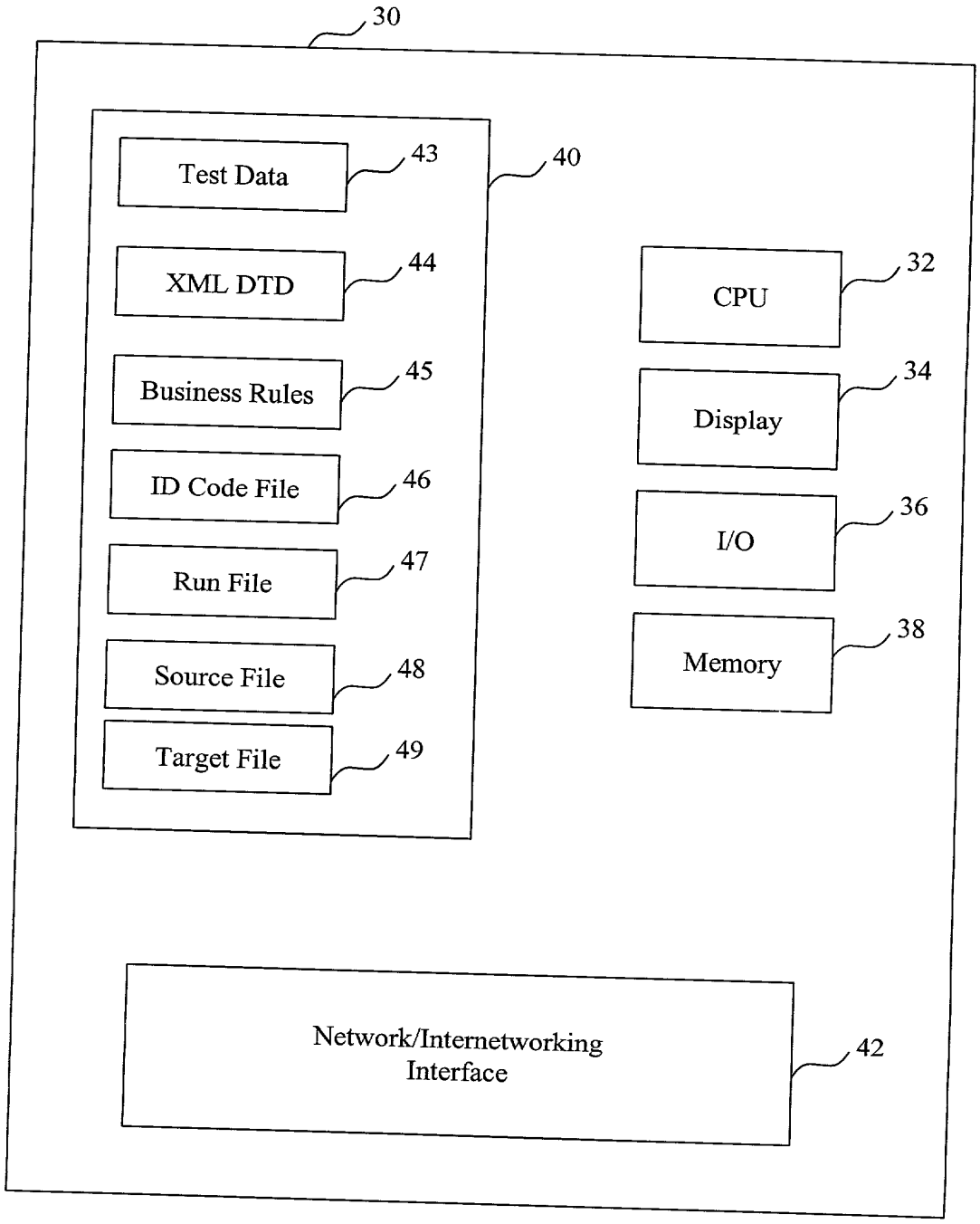
30
Test Data
43
40
XML DTD
44
Business Rules
45
ID Code File
46
Run File
47
Source File
48
Target File
49
CPU
32
Display
34
I/O
36
Memory
38
Network/Internetworking
Interface
42

Fig. 2

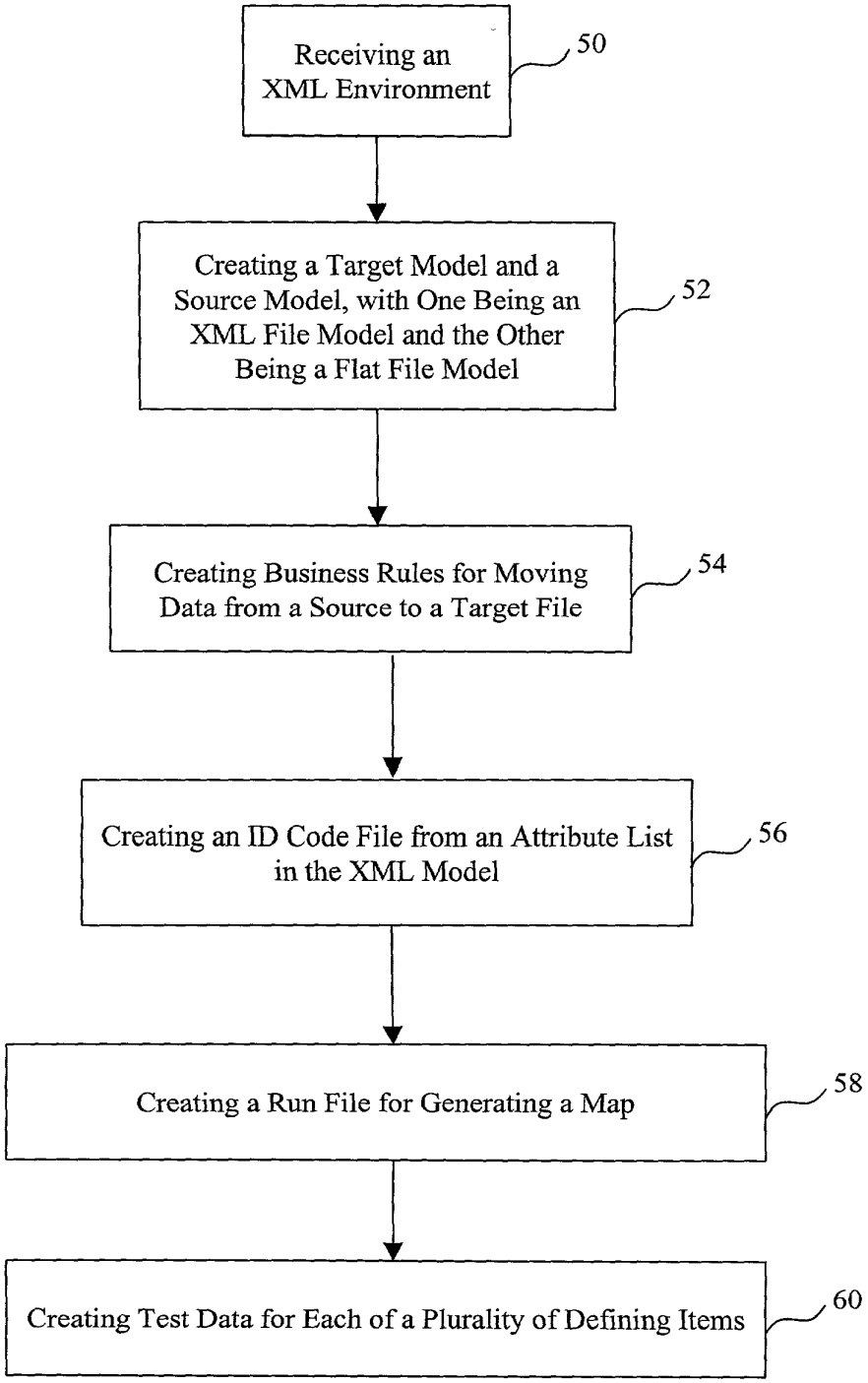
Receiving an XML Environment
50
Creating a Target Model and a Source Model, with One Being an XML File Model and the Other Being a Flat File Model
52
Creating Business Rules for Moving Data from a Source to a Target File
54
Creating an ID Code File from an Attribute List in the XML Model
56
Creating a Run File for Generating a Map
58
Creating Test Data for Each of a Plurality of Defining Items
60

Fig. 3

This is a sample of the XML DTD

```
<!ELEMENT PurchaseOrder (HeaderInformation,
DetailInformation+, ShippingInstructions)>
<!ELEMENT HeaderInformation
(CompanyName, CompanyAddress, CompanyState,
CompanyZip, PurchaseOrderNumber,
PurchaseOrderDate)>

<!ELEMENT DetailInformation (LineItem+)>
<!ELEMENT LineItem (LineNumber, QuantityOrdered,
PartNumber, PartDescription)>

<!ELEMENT ShippingInstructions (ShipDate, ShipDetails,
ShipCancelDate)>

<!ELEMENT CompanyName (#PCDATA)>
<!ELEMENT CompanyAddress (#PCDATA)>
<!ELEMENT CompanyCity (#PCDATA)>
<!ELEMENT CompanyState (#PCDATA)>
<!ELEMENT CompanyZip (#PCDATA)>
<!ELEMENT PurchaseOrderNumber (#PCDATA)>
<!ELEMENT PurchaseOrderDate (#PCDATA)>

<!ELEMENT LineNumber (#PCDATA)>
<!ELEMENT QuantityOrdered (#PCDATA)>
<!ELEMENT PartNumber (#PCDATA)>
<!ELEMENT PartDescription (#PCDATA)>

<!ELEMENT ShipDate (#PCDATA)>
<!ELEMENT ShipDetails (#PCDATA)>
<!ELEMENT ShipCancelDate (#PCDATA)>
```

Fig. 4A

This is a sample of the XML document that follows the DTD

```
<?XML Version="1.0"?>
<PurchaseOrder>
  <HeaderInformation>
    <CompanyName>ACME Distributing</CompanyName>
    <CompanyAddress>123 Main Street</CompanyAddress>
    <CompanyCity>Washington</CompanyCity>
    <CompanyState>DC</CompanyState>
    <CompanyZip>20202</CompanyZip>
    <PurchaseOrderNumber>27015219</ PurchaseOrderNumber >
    <PurchaseOrderDate>08171999</ PurchaseOrderDate >
  </HeaderInformation>
  <DetailInformation>
    <LineItem>
      <LineNumber>1</LineNumber>
      <QuantityOrdered>12</QuantityOrdered>
      <PartNumber>3AB32</PartNumber>
      <PartDescription>Blue Suede Shoe</PartDescription>
    </LineItem>
    <LineItem>
      <LineNumber>2</LineNumber>
      <QuantityOrdered>100</QuantityOrdered>
      <PartNumber>46Q64</PartNumber>
      <PartDescription>Shoe Laces 36 inch black</PartDescription>
    </LineItem>
  </DetailInformation>
  <ShippingInstructions>
    <ShipDate>09011999</ShipDate>
    <ShipDetails>Deliver to Door #10</ShipDetails>
    <ShipCancelDate>10011999</ShipCancelDate>
  </ShippingInstructions>
</PurchaseOrder>
```

Fig. 4B

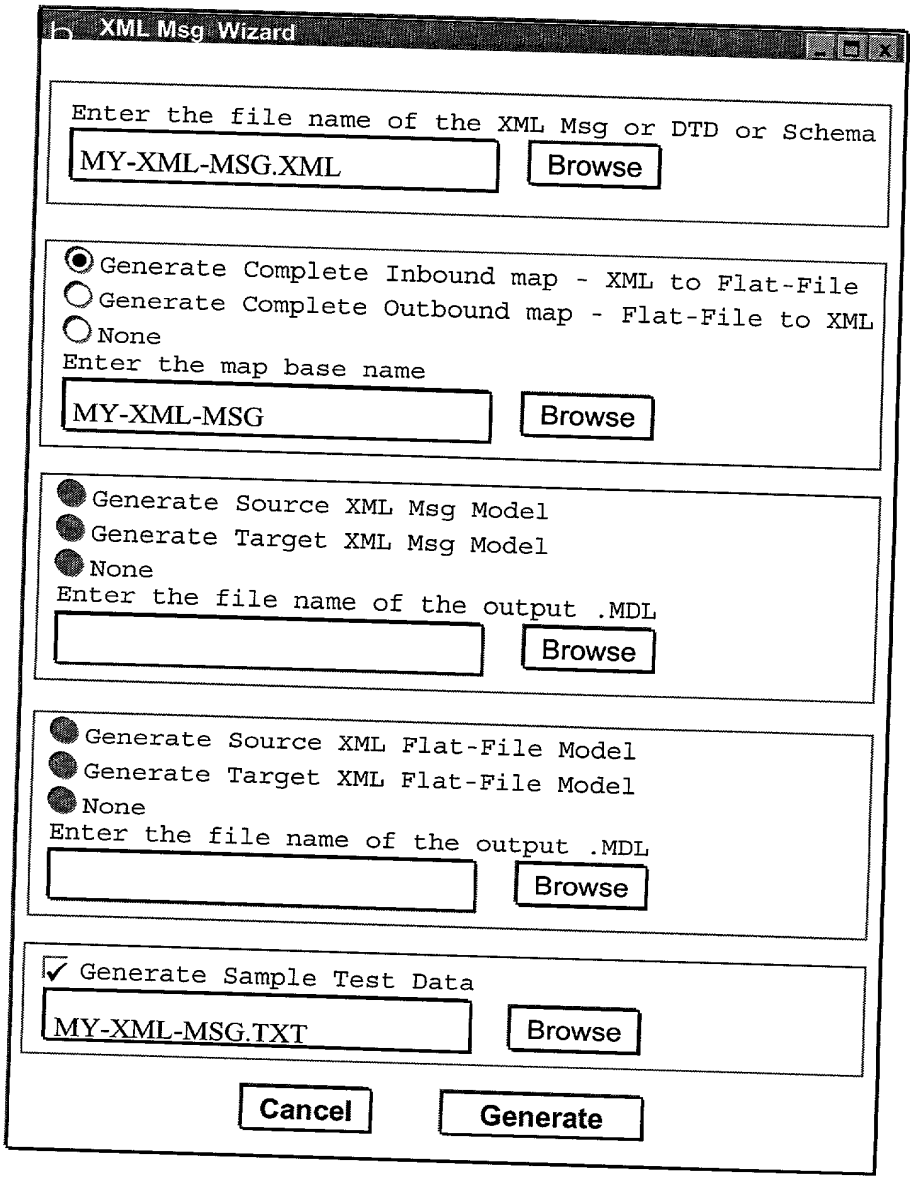
XML Msg Wizard
Enter the file name of the XML Msg or DTD or Schema
MY-XML-MSG.XML
Browse
Generate Complete Inbound map - XML to Flat-File
Generate Complete Outbound map - Flat-File to XML
None
Enter the map base name
MY-XML-MSG
Browse
Generate Source XML Msg Model
Generate Target XML Msg Model
None
Enter the file name of the output .MDL
Browse
Generate Source XML Flat-File Model
Generate Target XML Flat-File Model
None
Enter the file name of the output .MDL
Browse
Generate Sample Test Data
MY-XML-MSG.TXT
Browse
Cancel
Generate

Fig. 5

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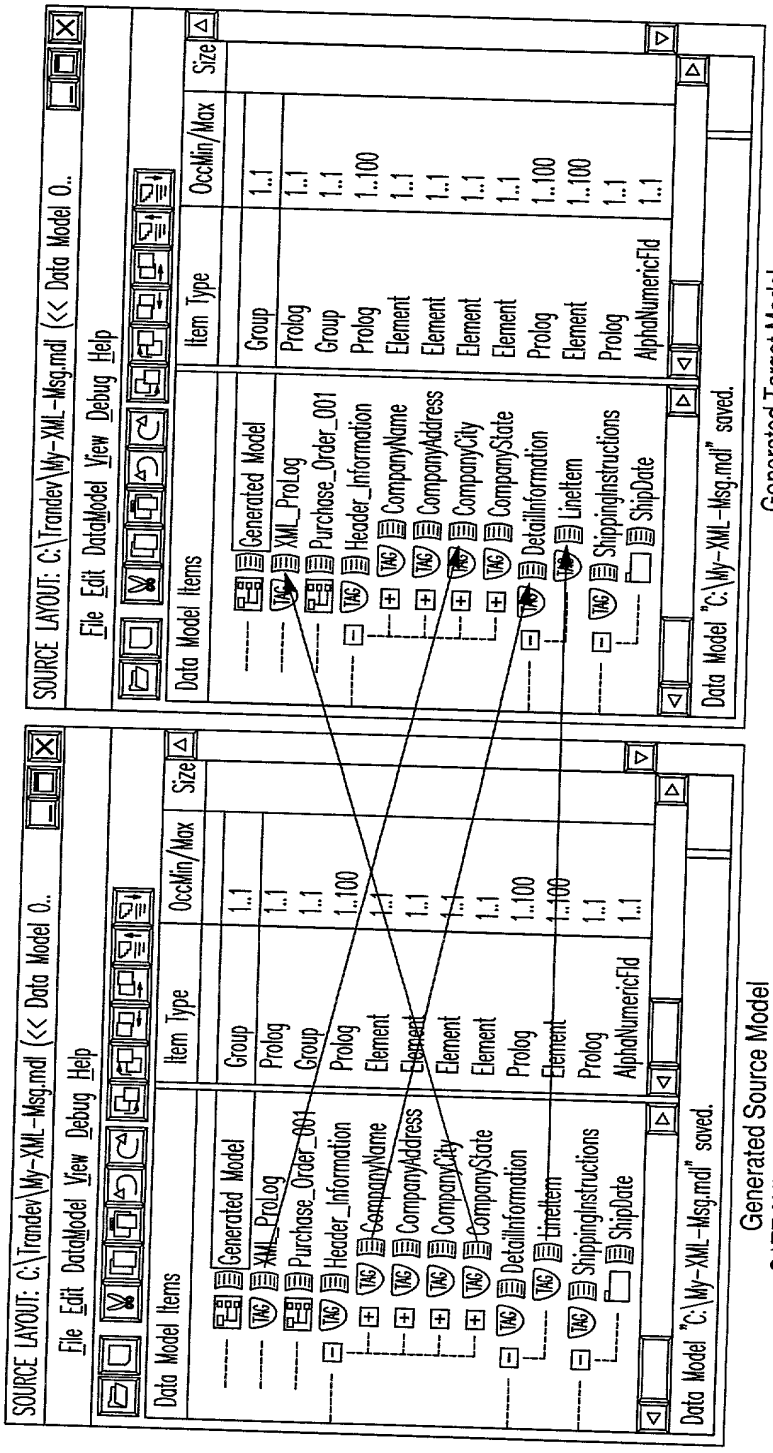


Fig. 6

Fig. 7

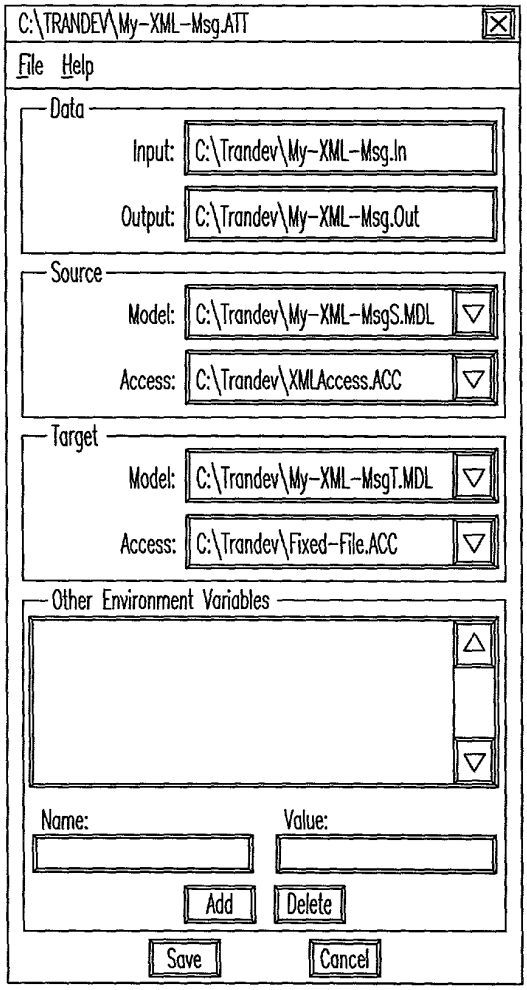

C:\TRANDEV\My-XML-Msg.ATT
File Help
Data
Input: C:\Trandev\My-XML-Msg.In
Output: C:\Trandev\My-XML-Msg.Out
Source
Model: C:\Trandev\My-XML-MsgS.MDL
Access: C:\Trandev\XMLAccess.ACC
Target
Model: C:\Trandev\My-XML-MsgT.MDL
Access: C:\Trandev\Fixed-File.ACC
Other Environment Variables
Name:
Value:
Add
Delete
Save
Cancel
C:\TRANDEV\MY-XML-MSG.ATT

Fig. 8

(Fig. 4A)

```
<!ELEMENT PurchaseOrder (HeaderInformation)
DetailInformation+, ShippingInstructions)>
<!ELEMENT HeaderInformation
(CompanyName, CompanyAddress, CompanyState,
CompanyZip, PurchaseOrderNumber,
PurchaseOrderDate)>

<!ELEMENT DetailInformation (LineItem+)>
<!ELEMENT LineItem (LineNumber, QuantityOrdered,
PartNumber, PartDescription)>

<!ELEMENT CompanyName (#PCDATA)>
<!ELEMENT CompanyAddress (#PCDATA)>
<!ELEMENT CompanyCity (#PCDATA)>
<!ELEMENT CompanyState (#PCDATA)>
<!ELEMENT CompanyZip (#PCDATA)>
<!ELEMENT PurchaseOrderNumber (#PCDATA)>
<!ELEMENT PurchaseOrderDate (#PCDATA)>

<!ELEMENT LineNumber (#PCDATA)>
<!ELEMENT QuantityOrdered (#PCDATA)>
<!ELEMENT PartNumber (#PCDATA)>
<!ELEMENT PartDescription (#PCDATA)>

<!ELEMENT ShipDate (#PCDATA)>
<!ELEMENT ShipDetails (#PCDATA)>
<!ELEMENT ShipCancelDate (#PCDATA)>
```

C:\TRANDEV\MY-XML-MSG.DTD

(Fig. 5)

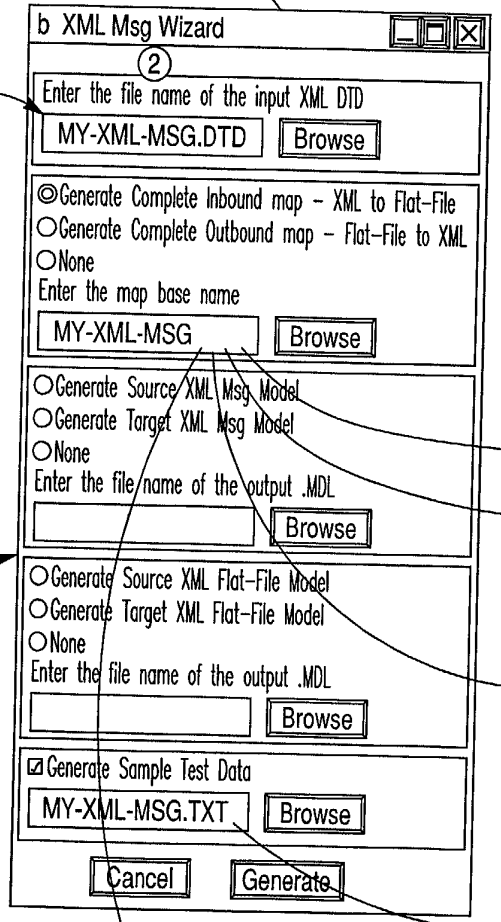
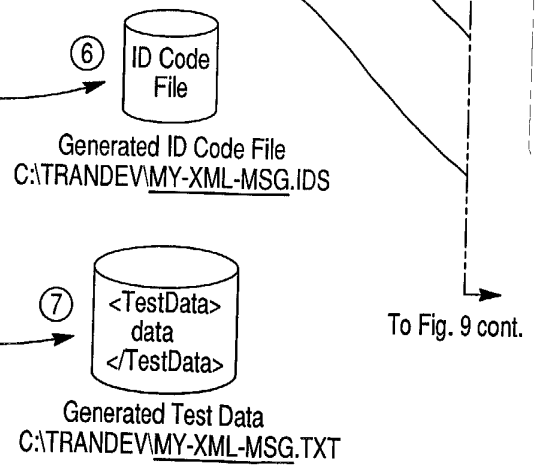


Fig. 9



To Fig. 9 cont.

To Fig. 9 cont.

De-Activated Box 3 & Box 4
(Grey'ed Out)

To Fig 9 cont.

To Fig 9 cont.

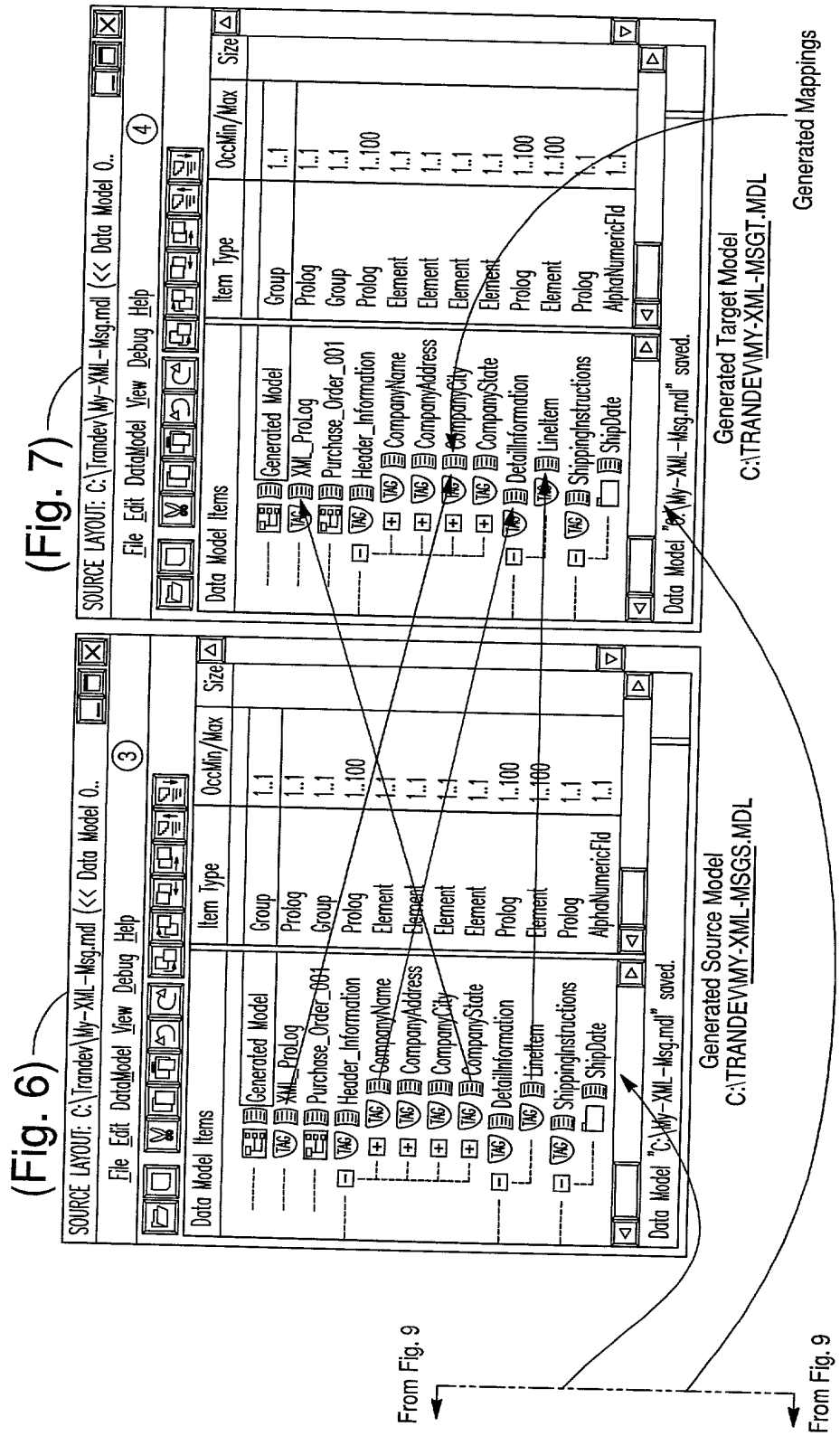

(Fig. 6)
SOURCE LAYOUT: C:\Trandev\My-XML-Msg.mdl (<< Data Model 0..
File Edit DataModel View Debug Help
3
Data Model Items
Item Type
Occ Min/Max
Size
Generated Model
XML_ProLog
Purchase_Order_001
Header_Information
CompanyName
CompanyAddress
CompanyCity
CompanyState
DetailInformation
LineItem
ShippingInstructions
ShipDate
Group
Prolog
Element
AlphaNumericFld
1..1
1..100
Data Model "C:\My-XML-Msg.mdl" saved.
Generated Source Model
C:\TRANDEV\MY-XML-MSGS.MDL
(Fig. 7)
SOURCE LAYOUT: C:\Trandev\My-XML-Msg.mdl (<< Data Model 0..
File Edit DataModel View Debug Help
4
Data Model "C:\My-XML-Msg.mdl" saved.
Generated Target Model
C:\TRANDEV\MY-XML-MSGT.MDL
Generated Mappings
From Fig. 9
From Fig. 9

Fig. 9 (cont.)

From Fig 9

From Fig 9

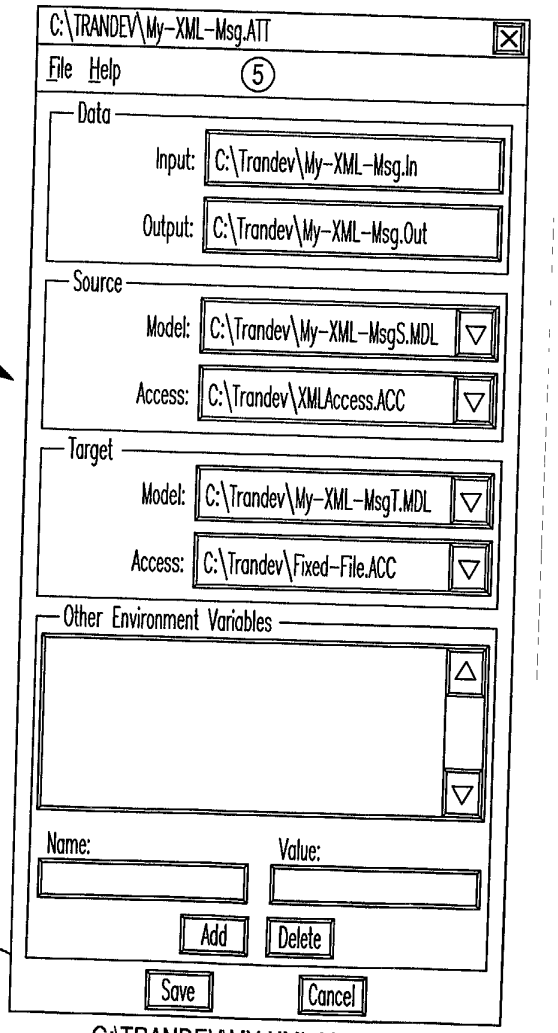
XML Message Wizard: Inbound

Create fully functional, run-able translation
Create New Map Component File
Create Source Inbound XML Message Model
Create Target Flat-File of XML Message Model
Create One-to-One mappings from Source to Target
Create Test Data

XML Message Wizard: Outbound

Create fully functional, run-able translation
Create New Map Component File
Create Source Inbound XML Message Model
Create Target Flat-File of XML Message Model
Create One-to-One mappings from Source to Target
Create Test Data

Fig. 9 (cont.)



(Fig. 8)

C:\TRANDEV\MY-XML-MSG.ATT